

Having thus described the invention, it is now claimed:

1. A method for selecting an operating frequency for a communication device being added to a wireless network including one or more existing communication
5 devices, comprising:
interrogating one or more of the existing communication devices to obtain communication parameter data indicative of at least the operating frequencies in use by the existing communication devices;
evaluating the communication parameter data; and
10 selecting the operating frequency of the communication device being added to the wireless communications network in accordance with said evaluated communication parameter data.
2. A method according to claim 1, wherein said step of interrogating
15 includes transmitting at least one request signal at each of a plurality of operating frequencies, wherein any existing communication device receiving the at least one request signal transmits a response signal indicative of receipt of said request signal.
3. A method according to claim 1, wherein said communication parameter
20 data further includes a value indicative of the received signal strength of received response signals.
4. A method according to claim 1, wherein said step of evaluating the
communication parameter data includes determining a value indicative of how many of
25 the existing communication devices use each operating frequency.

5. A method according to claim 1, wherein said communication parameter data further includes a value indicative of a load factor associated with a respective communication device.

5 6. A method according to claim 1, wherein said step of evaluating includes determining which operating frequency will result in the greatest balance among the operating frequencies being used.

7. A method according to claim 1, wherein said step of determining the
10 respective operating frequency of one or more the existing communication devices includes:

transmitting at the communication device being added, at least one request signal at each of a plurality of operating frequencies, wherein any existing communication device receiving the at least one request signal transmits a response signal indicative of
15 receipt of said request signal.

8. A method according to claim 1, wherein said step of selecting the operating frequency selects an optimum non-overlapping operating frequency.

20 9. A method according to claim 9, wherein said optimum non-overlapping frequency is the least used non-overlapping operating frequency.

10. A method according to claim 1, wherein said communication device is an access point, and said existing communication devices are access points.

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11. An apparatus for selecting an operating frequency for a communication device newly added to a wireless network having one or more existing communication device, comprising:
- 5 means for interrogating one or more of the existing communication devices to obtain communication parameter data indicative of at least the operating frequencies in use by the existing communication devices;
- means for evaluating the communication parameter data; and
- means for selecting the operating frequency for the communications device being added to the wireless communications network in accordance with said evaluated
- 10 communication parameter data.
12. An apparatus according to claim 11, wherein said means for interrogating includes means for transmitting at least one request signal at each of a plurality of operating frequencies, wherein any existing communication device receiving the at least
- 15 one request signal transmits a response signal indicative of receipt of said request signal.
13. An apparatus according to claim 11, wherein said communication parameter data obtained by said means for interrogating further includes a value indicative of the received signal strength of received response signals.
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14. An apparatus according to claim 11, wherein said means for evaluating the communication parameter data includes means for determining a value indicative of how many of the existing communication devices use each operating frequency.

15. An apparatus according to claim 11, wherein said communication parameter data obtained by said means for interrogating further includes a value indicative of a load factor associated with a respective communication device.
- 5 16. An apparatus according to claim 11, wherein said means for evaluating includes means for determining which operating frequency will result in the greatest balance among the operating frequencies being used.
- 10 17. An apparatus according to claim 11, wherein said means for selecting the operating frequency selects an optimum non-overlapping operating frequency.
18. An apparatus according to claim 11, wherein said communication device is an access point, and said existing communication devices are access points.

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